The identity of *Nyctemera simulatrix* WALKER, 1864 (Lepidoptera: Arctiidae, Nyctemerinae)

Rob DE Vos

Drs. Rob DE Vos, Instituut voor Systematiek en Populatiebiologie, afd. Entomologie, Plantage Middenlaan 64, NL-1018 DH Amsterdam, The Netherlands

Abstract: The true identity of *Nyctemera simulatrix* WALKER, 1864 is revealed, after more than eighty years of misidentification. The holotypes of *N. simulatrix* and *N. baulus nisa* (SWINHOE, 1903), with which *simulatrix* was confounded, are pictured and a revised taxonomic review is given. The recently revised *N. consobrina* (HOPFFER, 1874) is synonymized with *simulatrix*.

Die tatsächliche Identität von *Nyctemera simulatrix* WALKER, 1864 (Lepidoptera: Arctiidae, Nyctemerinae)

Zusammenfassung: Nach über 80 Jahren Fehlidentifikation wird durch Typenuntersuchung (in Oxford, Museum der Universität) die wahre Identität von *Nyctemera simulatrix* WALKER, 1864 festgestellt. Die Holotypen von *N. simulatrix* und von *N. baulus nisa* (SWINHOE, 1903), das Taxon, mit dem *simulatrix* verwechselt wurde, werden abgebildet, und ein Überblick über die geänderte taxonomische Situation wird gegeben. Die kürzlich revidierte *N. consobrina* (HOPFFER, 1874) wird mit *simulatrix* neu synonymisiert.

Identitas *Nyctemera simulatrix* WALKER, 1864 (Lepidoptera: Arctiidae, Nyctemerinae)

Ringkasan: Identitas yang benar *Nyctemera simulatrix* WALKER, 1864 disingkapkan, sesudah selama lebih dari delapan puluh tahun jenis ini salah diidentifikasikan. Holotype dari *N. simulatrix* dan holotype dari *N. baulus* nisa (SWINHOE, 1903), yang dengannya simulatrix dicampuradukkan, ada fotonya dan suatu tinjauan taksonomis yang direvisi diberikan. *Nyctemera consobrina* (HOPFFER, 1874) yang barusan direvisi dinyatakan sinonim dengan *simulatrix*.

Introduction

It is known that with the descriptions of new species of Lepidoptera Francis WALKER, the famous entomologist of the 19th century, did not illustrate the types. The inconvenience of not having seen the original type, together with the sometimes ambiguous description, can lead (and has led) to confusion.

Such confusion occured with *N. simulatrix* WALKER, 1864. The first author who depicted *simulatrix* was SEITZ (1915), but apparently he had not seen WALKER's type specimen.

In his description of *simulatrix* WALKER (1864) stated: "Fore wings with yellowish streaks on the veins at the base, and with a white band, which is composed of six more or less connected spots of various size .". The holotype indeed shows some yellowish colour on the veins at the very wingbase, but confined to a very small area close to the thorax (fig. 1) and not, as in SEITZ's figure, as thick beams stretched out over the basal half of the wing, connected to the transversal band ("a white band", in WALKER's description).

In fact, SEITZ (1915) illustrated a subspecies of *N. baulus* (BOISDUVAL, 1832), known from the northernmost part of Minahassa (north Sulawesi) and the Sangihe and Talaud Archipelagoes, earlier described (and illustrated!) by SWINHOE (1903) as *Deilemera (Tripheromera) nisa* (fig. 2) from Sangihe, which SEITZ mentioned but did not figure.

Unfortunately, subsequent authors accepted SEITZ's misidentification without hesitation and also mentioned the subspecies of SWINHOE. Thus *N. baulus simulatrix* was interpreted as the subspecies of Sulawesi and *N. baulus nisa* was found on the Sangihe and Talaud Archipelagoes.

In his comprehensive paper on the genus *Nyctemera,* ROEPKE (1957) considered *N. baulus simulatrix* as the subspecies from Sulawesi, and he is very definite about the identity of *simulatrix,* being a subspecies of *baulus,* because he "examined the genitalia of several *simulatrix* males. They are just the same as in ordinary *baulus.*" He did, however, not see WALKER's type of *simulatrix,* but nevertheless he stated that "There can be no doubt that the insect [*simulatrix*], described and figured by SNELLEN as *latistriga* WALKER, is the same." The specimen figured by SNELLEN (1879) is in fact a typical *baulus baulus.* To make it even more complex, MEYRICK (1886) proposed a new name for this "species" figured by SNELLEN, *tertiana,* which is thus a junior synonym of *baulus baulus.* From the localities mentioned it is obvious the "several *simulatrix* males" of ROEPKE (1957) include at least one specimen of *baulus nisa,* figured on plate 9, fig. 16, from northern Sulawesi. Other specimens mentioned are typical *baulus baulus* and ab. *bipunctata* NIEUWENHUIS, 1948. Furthermore he deals with *N. baulus nisa* from Talaud and Sangihe, which is, without doubt, correct.

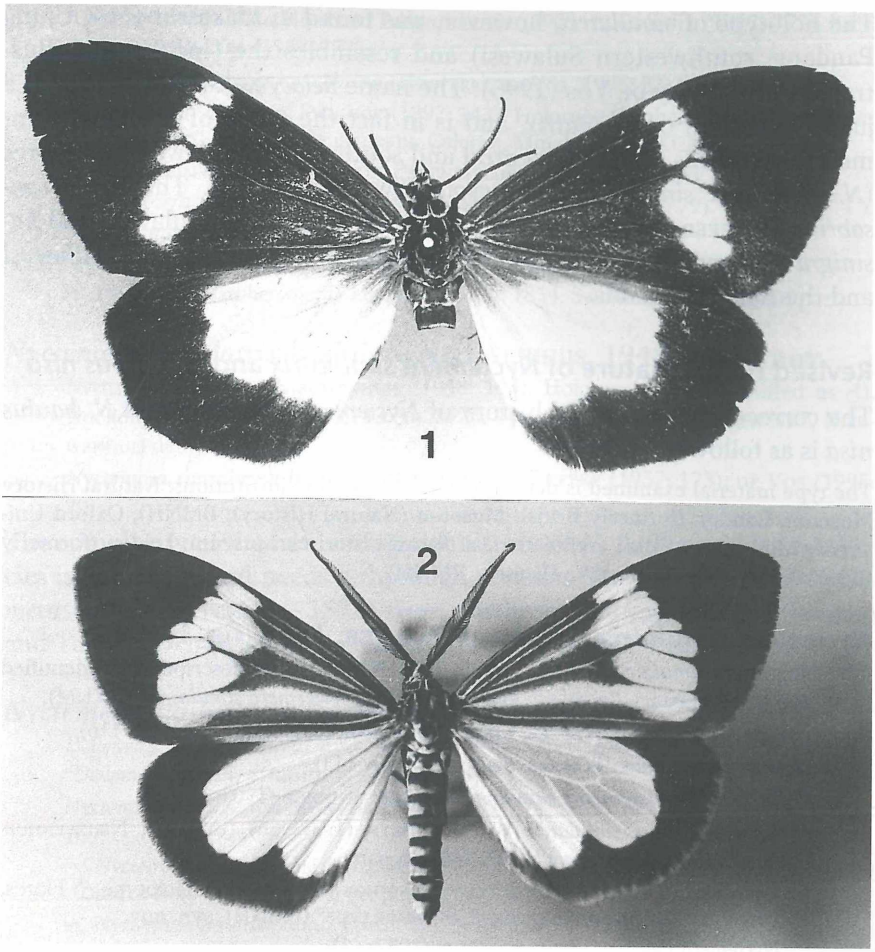

Fig. 1: *Nyctemera simulatrix simulatrix* WALKER, 1864, ♀ (southwestern Sulawesi, "Makassar", holotype). **Fig. 2:** *Nyctemera baulus nisa* (SWINHOE, 1903), ♂ (Sangihe Island, holotype).

Before revising *N. consobrina* (HOPFFER, 1874) from Sulawesi and Flores (DE VOS 1995), I had never expected the confusion caused by SEITZ (1915) and other authors, until I was able to examine the holotype of *simulatrix* WALKER, 1864 in the Oxford University Museum (OXUM), Oxford, U.K. Although the greater part of the abdomen is missing (only the first two segments are present), there is no doubt that it is conspecific with *consobrina* HOPFFER, 1874, which becomes a junior synonym of *simulatrix*.

The holotype of *simulatrix,* however, was found in Makassar (now Ujung Pandang, southwestern Sulawesi) and resembles the "local form" illustrated in fig. 6b by DE VOS (1995). The name *delocyma* SWINHOE, 1917 is a junior synonym of *simulatrix,* and is in fact the name of the most common form of this species in central and southwestern Sulawesi and Flores (*N. simulatrix simulatrix* f. *delocyma* (SWINHOE, 1917)). The name *consobrina* HOPFFER remains for the subspecies of northern Sulawesi and *basinigra* NIEUWENHUIS, 1948 for the subspecies in southeastern Sulawesi and the Banggai Islands.

Revised nomenclature of *Nyctemera simulatrix* and *N. baulus nisa*

The correct nomenclatorial history of *Nyctemera simulatrix* and *N. baulus nisa* is as follows.

The type material examined is deposited in the following institutions: Natural History Museum, London (formerly British Museum (Natural History), BMNH), Oxford University Museum (OXUM) and Nationaal Natuurhistorisch Museum, Leiden (formerly Rijksmuseum voor Natuurlijke Historie, RMNH).

Nyctemera simulatrix simulatrix WALKER, 1864 (fig. 1)

Nyctemera simulatrix WALKER (1864: 198). Holotype ♀ (in description misidentified as ♂), "Mak[assar], Celeb[es], WALKER's type of *Nyctemera simulatrix*" (OXUM).

Nyctemera simulatrix WALKER: KIRBY (1892: 420); PAGENSTECHER (1901: 116).

Leptosoma simulatrix WALKER: SWINHOE (1892: 143).

Deilemera (Tripheromera) simulatrix WALKER: SWINHOE (1903: 74).

Nyctemera baulus simulatrix WALKER: BRYK (1937: 56) (in part); NIEUWENHUIS (1948:42) (in part); ROEPKE (1957: 168) (in part).

= *Deilemera (Tripheromera) delocyma* SWINHOE (1917 a: 415). Holotype ♂: Flores, EVERETT, "*Deilemera delocyma* ♂, SWINHOE type" (BMNH), **syn. nov.**

Nyctemera delocyma SWINHOE: BRYK (1937: 61).

Nyctemera delocyma delocyma SWINHOE: ROEPKE (1954: 260).

Nyctemera consobrina delocyma (SWINHOE): DE VOS (1995: 86).

= *Deilemera everetti* SWINHOE (1917b: 160). Holotype ♀ (mislabeled as ♂), Flores, EVERETT, "*Deilemera everetti* ♂, SWINHOE type, = *simulatrix* WLK." (BMNH), **syn. nov.**

Nyctemera everetti SWINHOE: BRYK (1937: 62).

Nyctemera everetti everetti SWINHOE: ROEPKE (1954: 260).

= *Nyctemera baulus baulus* BOISDUVAL, 1832: ROEPKE (1949: 50) (in part).

Nyctemera simulatrix consobrina (HOPFFER, 1874) comb. nov.

Leptosoma consobrina HOPFFER (1874: 45). Holotype ♀, Gorontalo, Minahassa (Zoologisches Museum der Humboldt-Universität, Berlin, type not seen).

Nyctemera consobrina HOPFFER: PAGENSTECHER (1901: 114); SEITZ (1915: 270); BRYK (1937: 60); ROEPKE (1957: 172).

Nyctemera consobrina consobrina (HOPFFER): DE VOS (1995: 82).

= *Leptosoma acceptum* SWINHOE (1892: 143). Holotype ♀, labeled with "Celebes or Mindanao" [more likely is meant: Celebes, Minahassa] (OXUM).

Nyctemera acceptum SWINHOE: PAGENSTECHER (1901: 115); BRYK (1937: 49).

Deilemera (Tripheromera) accepta SWINHOE: SWINHOE (1903: 79).

Nyctemera accepta SWINHOE: SEITZ (1915: 272).

= *Nyctemera inconstans* VOLLENHOVEN, 1863: KIRBY (1892: 421) (in part).

= *Deilemera (Tripheromera) latistriga* WALK., 1854: SWINHOE (1903: 78) (in part).

Nyctemera simulatrix basinigra NIEUWENHUIS, 1948 comb. nov.

Nyctemera basinigra NIEUWENHUIS (1948: 143). Holotype ♀ (misidentified as ♂), Noelion, Peling, Banggaai eil., 13. XII. 1936, Type, "*Nyctemera basinigra* Ns.", NIEUWENHUIS det. (RMNH).

Nyctemera consobrina basinigra NIEUWENHUIS: ROEPKE (1957: 173); DE VOS (1995: 90).

The complexity of the nomenclatorial history of *N. baulus* and its subspecies is enormous and needs a thorough revision. The subspecies of *Nyctemera baulus* (BOISDUVAL, 1832) from northern Sulawesi and the Sangihe and Talaud Archipelagoes has the following nomenclatorial history:

Nyctemera baulus nisa (SWINHOE, 1903) (fig. 2)

Deilemera (Tripheromera) nisa SWINHOE (1903: 77). Holotype ♂, Sangir, II.-III. 1892, "*Deilemera nisa* ♂, SWINHOE type" (BMNH).

Nyctemera baulus nisa SWINHOE: SEITZ (1915: 271); BRYK (1937: 56); ROEPKE (1957: 169).

= *Nyctemera baulus simulatrix* WALKER: SEITZ (1915: 271); BRYK (1937: 56) (in part); ROEPKE (1957: 168) (in part).

= *Nyctemera baulus baulus* BOISDUVAL: ROEPKE (1949: 51) (in part).

Acknowledgements

The author likes to thank Dr. G. C. MCGAVIN and Dr. C. O'TOOLE of the Hope Entomological Collections (Oxford University Museum) in Oxford (OXUM), Dr. R. DE JONG of the Nationaal Natuurhistorisch Museum in Leiden (RMNH) and Mr. D. T. GOODGER of the Natural History Museum in London (BMNH), for allowing him to study material from their collections, Mr. W. HOGENES (Amsterdam) and Mr. K. ALDERS (Arnhem) for reading and commenting on the manuscript and Mr. H. J. G. VAN MASTRIGT (Sentani, Irian Jaya) for providing the Indonesian abstract.

References

BRYK, F. (1937): Lepidopterorum Catalogus, Pars **82:** Arctiidae, Subfam.: Callimorphinae et Nyctemerinae, 105 pp. – 's Gravenhage (W. Junk).

HOPFFER, C. (1874): Beitrag zur Lepidopteren-Fauna von Celebes. – Stettiner Entomol. Z. **35** (1/3): 17-47.

KIRBY, W. F. (1892): A synonymic catalogue of Lepidoptera Heterocera (Moths), vol. I, 951 pp. – London (Gurney & Jackson).

MEYRICK, E. (1886): On the synonymy of some species of *Nyctemera*. – Entomologist's Monthly Magazine **23:** 15-16.

NIEUWENHUIS, E. J. (1948): Lepidoptera van den Banggaai-Archipel II. – Tijdschr. Entomol. **89:** 139-148.

PAGENSTECHER, A. (1901): Über die Gattung *Nyctemera* HÜBN. und Ihre Verwandten. – Beiträge zur Lepidopterenfauna des Malayischen Archipels **14:** 1-175.

ROEPKE, W. (1949): The genus *Nyctemera* HÜBNER. – Trans. r. entomol. Soc. London **100** (2): 47-70.

—— (1954): Some new or little known Lepidoptera from Indonesia and New Guinea, I. – Tijdschr. Entomol. **97** (4): 257-262.

—— (1957): The genus *Nyctemera* HÜBNER, II. – Tijdschr. Entomol. **100** (2): 147-178.

SEITZ, A. (ed.) (1915): Die Gross-Schmetterlinge der Erde, 10. Band, 909 pp. – Stuttgart (A. Kernen).

SNELLEN, P. C. T. (1879): Lepidoptera van Celebes verzameld door Mr. M. C. PIEPERS, met aanteekeningen en beschrijving der nieuwe soorten. – Tijdschr. Entomol. **22:** 61-126.

SWINHOE, C. (1892): Catalogue of eastern and Australian Lepidoptera Heterocera, part I, Sphinges and Bombyces, 324 pp. – Oxford (Clarendon).

—— (1903): On the genus *Deilemera*, HÜBNER. – Trans. entomol. Soc. London **1903:** 53-85.

—— (1917 a): New species of Indo-Malayan Lepidoptera. – Ann. Mag. Nat. Hist. (8) **19:** 409-416.

—— (1917 b): New Indo-Malayan species of Lepidoptera. – Ann. Mag. Nat. Hist. (8) **20:** 157-166.

VOS, R. DE (1995): A revision of *Nyctemera consobrina* (HOPFFER, 1874) with redescriptions of three subspecies (Lepidoptera: Arctiidae, Nyctemerinae). – Nachr. entomol. Ver. Apollo, Frankfurt/Main, N.F. **16** (1): 81-93.

WALKER, F. (1864): List of the specimens of Lepidopterous Insects in the collection of the British Museum, 321 pp. – London (The Trustees).

Received: 27. II. 1997

© Entomologischer Verein Apollo e. V., Frankfurt am Main, Oktober 1997 ISSN 0723-9912